

What is claimed is:

1. A voltage standard apparatus using a voltage standard element comprising a Josephson junction array, the voltage standard apparatus comprising:

Josephson junctions for generating constant voltage by impressing bias current and microwave, wherein the Josephson junction devices are grouped into sections based on the  $n$ th power of 3, wherein at least one bias current terminal is provided for each of the sections;

a bias current supplying circuit for independently impressing bias current having predetermined value to the bias current terminals; and

a controlling circuit for impressing predetermined bias current to the sections of Josephson junction array and controlling impression of microwave.

2. The voltage standard apparatus according to claim 1, further including a binary/ternary code converter wherein the controlling circuit is operated by binary code.

3. The voltage standard apparatus according to claim 3, the binary/ternary code converter is provided in the controlling circuit.